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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/753,419

01/09/2004

Kia Silverbrook

DAM01US

6374

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7590

10/10/2006

SILVERBROOK RESEARCH PTY LTD
393 DARLING STREET
BALMAIN, NSW 2041
AUSTRALIA

EXAMINER

MASINICK, MICHAEL D

ART UNIT

PAPER NUMBER

2125

DATE MAILED: 10/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/753,419

Applicant(s)

SILVERBROOK, KIA

Examiner

Michael D. Masinick

Art Unit

2125

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,6-17,19,21-24 and 26-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,6-17,19 and 23 is/are rejected.
- 7) ☒ Claim(s) 2,21,22,24 and 26-30 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Claims 1-4, 6-17, 19, 21-24, 26-30 are pending in this application. This action is in response to the amendment filed 8/21/2006.

Response to Amendment

Applicant's amendments filed 8/21/2006 are not persuasive over the prior art used in the rejection dated 7/11/2006. The Penn patent (5,594,652) clearly shows the use of multiple materials being printed and maintained at different temperatures in column 11, lines 40-49 which state:

(33) In an example of preferred process according to the present invention, liquid wax at 140 degF. (material 25) is jet-printed in sequential layers to form the object pattern. Simultaneously, sequential layers of ice (material 35) are jet-printed around the object pattern to form a frozen mold. The combined solid mass of materials 25, 35 is then heated to melt the mold portion only, leaving a high resolution, recyclable casting pattern. Many other materials 25,35 combinations are possible, limited only by the imagination of those skilled in the art.

Clearly "ice" that is jet printed around the layers of liquid wax are not maintained at 140 degrees (or it would be water, not ice). This passage clearly shows a first and second material maintained at a first and second temperature where the materials and temperatures are not the same. All rejections are maintained as previously written with the addition of citations for claim elements added in the recent amendment.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3, 4, 6-17, 19, 20, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,594,652 to Penn et al in view of U.S. Patent No. 6,641,243 to Anderson et al.

1. Referring to claim 1, Penn shows a three dimensional object creation system that prints objects layer by layer, the system including a plurality of printheads (Column 6, lines 51-65), the system printing at least part of each of multiple layers simultaneously (Column 11, lines 40-49) and shows a first and second material maintained at a first and second temperature where the materials and temperatures are not the same.

2. Penn shows where the materials are maintained at different temperatures, but does not specifically show where the plurality of printheads are maintained at certain temperatures. The Anderson Patent shows a temperature control system for printheads. While the Anderson patent shows that a plurality of printheads can be maintained at the same temperature when printing the same materials, it should be noted that the Anderson patent is being relied upon to show that maintaining the temperature of the printhead is possible. It is not to bodily incorporate the full teachings of the Anderson patent into the Penn patent.

3. It would have been obvious to one of ordinary skill at the time the invention was made to use the concept of the temperature control system for printheads to control the temperature of the printheads printing different materials at different temperatures of the Penn patent because operating at different temperatures may lead to ink droplet variation (Column 1, lines 32-44 of Anderson).

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4. Referring to claim 3, Penn shows wherein a plurality of objects are simultaneously printed (Column 13, lines 1-26).
5. Referring to claim 4, Penn shows that when completed, the objects are substantially identical. Examiner notes that this is the purpose of the 3D prototyping system of Penn and column 1 notes that these models are created in "low volume".
6. Referring to claim 6, Penn shows wherein each printhead only prints part or all of a predetermined layer (Figure 12, Column 3, lines 27-32).
7. Referring to claim 7, 19, 20 Penn shows wherein at least one layer has at least two different materials (Top of column 3).
8. Referring to claim 8-10, Penn shows wherein at least one layer is printed by at least two inkjet printheads per layer able to print the width of the objects (figure 12).
9. Referring to claim 11, Penn show wherein multiple layers of the same material are printed (top of column 3).
10. Referring to claim 12, Penn shows including a plurality of layer groups, each layer group including at least one printhead, each of the layer groups configured to print a different layer of the objects (Figure 1A).
11. Referring to claims 13-17, Penn shows layer groups, multiple printheads, and voxels (in addition to what was noted above, view the abstract for voxels).
12. Referring to claim 23, Penn shows wherein the system includes semiconductor memory and wherein data defining at least one layer is stored in the semiconductor memory (Column 9, "microprocessor control system").

Allowable Subject Matter

All claims not treated above are considered to have allowable subject matter for reasons indicated in parent and co-pending applications.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael D. Masinick whose telephone number is (571) 272-3746. The examiner can normally be reached on Mon-Fri, 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard can be reached on (571) 272-3749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Michael D Masinick
Examiner
Art Unit 2125

MDM, October 4, 2006